between projected costs across methods was statistically significant (Kappa > 0.80, p < 0.001) in each head-to-head comparison, confirming the feasibility of using the LR to approximate the results of the decision analysis. **CONCLUSIONS:** Both methods demonstrate that glipizide GITS is the least expensive first-line therapy for newly diagnosed Type-2 diabetes patients, followed by metformin and rosiglitazone. The LR can be used as a quick and easy tool for use in approximation of the more comprehensive decision tree.

PDB14

RESOURCE UTILIZATION USING INNOLET VS. VIAL/SYRINGE FOR DAILY INSULIN INJECTION IN A SUBGROUP OF ELDERLY DIABETIC PATIENTS

Nicklasson L[1], Lyness W[1], Liang J[1], Skovlund S[2], Lytzen L[2]
[1]Novo Nordisk Pharmaceuticals Inc, Princeton, NJ, USA; [2]Novo Nordisk A/S, Bagsvaerd, Denmark

OBJECTIVE: The goal of this study was to compare resource utilization for two insulin delivery devices: InnoLet® and vial/syringe. **METHODS:** Diabetic patients requiring assistance with insulin injections (vision and/or motor impairments) were followed over two 6-week periods in a randomized crossover study to estimate the resource utilization associated with different insulin delivery systems: the InnoLet® insulin doser or the vial and syringe. A total of 79 patients were enrolled in the study. Resource utilization was measured as the number of visits per day which the nurse/caregivers needed to have with the patient in order to assist (if required) with an injection, times the costs for such a visit ($80/hour; minimum visit 1 hour based on local visiting nursing rate) plus the daily cost for insulin. **RESULTS:** The mean age of patients was 68.2 ± 8.6 years, with a mean A1c level of 7.5 ± 1.4 at baseline. Patients were previously treated with vial/syringe and required assistance with making injections. Reported major hypoglycemic events occurred as frequently with both treatments. The mean daily costs for home visits associated with the injections were $99 and $179 for the InnoLet and vials/syringe patients, respectively (p < 0.001). Fifty-three percent of the patients became independent of nursing/caregiver assistance for the injections when using InnoLet®. Furthermore, the mean time spent by nurses or caregivers for assisting in injection preparation was lower for patients using the InnoLet doser than for the vial and syringe. **CONCLUSIONS:** Patients using the InnoLet® doser required significantly fewer visits from nurses/caregivers, resulting in less resource utilization, and use of InnoLet® fostered independence in patients who had difficulty with self-injection using vial and syringe.

PDB15

COST-EFFECTIVENESS ANALYSIS OF GRAFTSKIN (APLIGRAF) AND BECAPLERMIN (REGRANEX) IN DIABETIC NEUROPATHIC FOOT ULCERS

Park J, Hay JW
University of Southern California, Los Angeles, CA, USA

Becaplermin (Regranex®), a recombinant human platelet-derived growth factor, and graftskin (Apligraf®), a bilayered tissue-engineered human skin equivalent, promote the local wound healing process and therefore reduce the time to complete healing and rate of amputation of lower extremity in diabetic foot ulcer patients. However, very limited information is available for the relative cost-effectiveness of these new treatments. **OBJECTIVES:** To evaluate the cost-effectiveness of graftskin plus standard foot care and becaplermin plus standard foot care in comparison to the standard foot care alone from the societal perspective. **METHODS:** A decision analysis model was built for chronic diabetic foot ulcer patients. Study period was one year. The effectiveness was measured in quality-adjusted-life years (QALYs). Data for QALYs, transition probabilities, efficacy, and costs were taken mostly from the literature. All costs were adjusted to 2002 US dollars. Sensitivity analyses were performed on important parameters including costs and efficacy of graftskin and becaplermin, and costs of amputation. **RESULTS:** In the base case analysis, graftskin was a dominant strategy over becaplermin and standard care. Also, becaplermin was the dominant strategy over standard care alone. Compared to the standard care group and the becaplermin group, the graftskin group had higher QALYs (difference was 0.03 and 0.06, respectively). In terms of savings of medical costs, the graftskin group gained $2202 and $179, compared to the standard care group and the becaplermin group during the study period. The results of the sensitivity analysis were consistent with the results of the base case analysis. **CONCLUSIONS:** Although the standard care costs less at the initial state, patients receiving the standard care only are more likely to have costly outcomes compared to patients receiving graftskin or becaplermin, and this translates into higher expected costs. Also, results indicate that treating diabetic foot ulcer patients with graftskin was more cost-effective than treating with becaplermin.

PDB16

COST OF TYPE 2 DIABETES CARE IN AUSTRALIA—THE DIABCOST STUDY

Colagiuri S[1], Conway B[2], Grainger D[3], Davey P[4], Colagiuri R[5], Graham-Clarke P[6], FitzGerald P[4], Le Reun C[4], Price N[4]
[1]Prince of Wales Hospital, Sydney, NSW, Australia; [2]Diabetes Australia Ltd, Canberra, ACT, Australia; [3]Eli Lilly Australia Pty Ltd, Sydney, NSW, Australia; [4]Medical Technology Assessment Group, Chatswood West, NSW, Australia; [5]Australian Centre for Diabetes Strategies, Sydney, NSW, Australia; [6]Eli Lilly Australia Pty Ltd, West Ryde, NSW, Australia

OBJECTIVES: The primary objective of the Diabcost study was to determine the cost of type 2 diabetes in Australia. Additional objectives were to collect data on quality of life, health service use and indirect costs for people with type 2 diabetes, and to improve understanding of the burden on carers. **METHODS:** A paper-based questionnaire was used to collect cross-sectional survey data. Approximately 25,000 questionnaires were mailed to people on a national diabetes database and responses were received from 10,652 people. Respondents were asked to self-report three months' retrospective data. Questions covered demographic information, health status (including history of microvascular and macrovascular complications), health service utilisation, cost to people with diabetes, lost productivity and quality of life (EQ-5D). A separate questionnaire filled in by carers covered carer burden. Derivation of costs used a combination of costs and charges. **RESULTS:** The mean annual cost per individual with type 2 diabetes was $A7565. There were direct costs of $A5325 (comprising $A4260 in health care and $A1065 in non health care costs). Self-reported indirect costs were $A35 and carer costs were $A2150. When the population was divided into four groups based on history of complications, it was clear that more complications resulted in higher average costs. The cost for respondents with no complications was $A4025, with microvascular complications only was $A7025, with macrovascular complications only was $A9055 and with both complications was $A9645. Utilities and quality of life also differed for the four groups. The overall cost of type 2 diabetes in Australia was calculated to be $A3 billion. **CONCLUSIONS:** Type 2 diabetes impacts significantly on affected individuals and their carers. Onset of macrovascular and microvascular complications increases the burden of illness through deterioration in quality of life and increased costs to the community.

PDB17

ECONOMIC ANALYSIS OF THE USE OF ANGIOTENSIN CONVERTING ENZYME INHIBITORS IN PATIENTS WITH DIABETES MELLITUS

Zammit DC, Hay JW
University of Southern California, Los Angeles, CA, USA

OBJECTIVE: To develop a model to evaluate the cost-effectiveness of starting patients with Diabetes Mellitus on lifelong therapy with ACE-Is immediately on diagnosis. Although apparently already a dominant strategy for renal protection in diabetes, ACE-Is are not prescribed to patients immediately on diagnosis of Type II diabetes. Determining whether they have overall cost-effectiveness in preventing cardiac endpoints may be useful in updating treatment guidelines. **METHODS:** Interventions: Treating patients with DM with ACE-Is immediately on diagnosis vs. not using ACE-Is. Design: Age-specific lifetime costs and QALYs associated with each of the endpoints: MI, stroke and ESRD, were estimated for each intervention strategy. Time Horizon: Lifetime. Perspective: Societal. Target Population: The model was estimated in females aged 40 and over. Model measures: discounted lifetime cost, discounted quality-adjusted life expectancy for each strategy. Incremental cost-effectiveness ratio. Data Sources: Randomized control trials estimating the effect of ACE-Is on the occurrence of each endpoint, life tables for mortality and life expectancy data, epidemiological and observational studies to estimate the added risk for each endpoint contributed by diabetes, and quality of life/health utility studies to estimate QALYs associated with each endpoint. **RESULTS:** Base-Case Analysis: Immediately starting therapy with ACE-Is was shown to be a dominant strategy. Starting from age 40, this strategy would save total discounted lifetime costs of $63,835 and improve discounted quality-adjusted life expectancy by almost 2 years. Sensitivity Analysis: Although still indicating a dominant strategy, both lifetime costs and QALYs are sensitive to the discount rate used, and lifetime costs are highly sensitive to the lifetime cost of ESRD management. **CONCLUSIONS:** Starting all patients with Type II DM on lifelong ACE-I therapy is a simple strategy that provides greater benefit at a lower cost. It may be worth considering its implementation as a standard diabetes patient management strategy.

PDB18

ESTIMATING THE COST-EFFECTIVENESS OF REPAGLINIDE PLUS METFORMIN VS. NATEGLINIDE PLUS METFORMIN OVER A 30-YEAR PERIOD

Nicklasson L[1], Palmer A[2], Gall MA[3], Roze S[2]
[1]Novo Nordisk Pharmaceuticals, Princeton, NJ, USA; [2]CORE Center for Outcomes Research, Basel, Switzerland; [3]Novo Nordisk A/S, Bagsvaerd, Denmark

OBJECTIVES: To simulate the cost-effectiveness of two different treatment regimens for type 2 diabetes patients. **METHODS:** Cost-effectiveness was measured as cost per life years gained (LYG) and cost per quality adjusted life years gained (QALY). A standard Monte Carlo simulation combining published literature for risk of long-term diabetic complications with risk functions for each complication was used. Clinical outcomes were based upon the following long-term diabetic complications: cardiovascular, neuropathy, nephropathy, and retinopathy. Lifetime costs were calculated as the yearly costs for drugs plus cost for complications (US Medicare perspective) over a 30-year period, and clinical outcomes and lifetime costs were discounted at 3%. Patient baseline data were taken from a randomized, multicenter trial, comparing a treatment regimen of repaglinide plus metformin vs. nateglinide plus metformin for type 2 diabetic patients. After dose adjustments to achieve glycemic targets, median final daily doses were 5 mg repaglinide and 360 mg nateglinide. **RESULTS:** The reduction in A1c values from baseline was −1.28% point ($p < 0.001$) and